AMENDMENTS TO THE SPECIFICATION

Please delete the paragraph beginning on page 10, line 30.

Please amend the paragraph beginning on page 11, line 3 as follows:

-- ~~Fig. 4B~~ Fig. 4 is a graphical illustration of the origin of the gray scales or levels of contrast to illustrate the invention. --

Please amend the paragraph beginning on page 16, line 19 as follows:

-- ~~Fig. 4A is a graphical illustration of the~~ The elongated wavelength dispersed image ~~52 which is~~ that is focused by grating 36 of Fig. 1A onto the plane of the modulator depicted in Fig.2 to ~~illustrate the invention. As shown in Fig. 4A, the elongated image 52~~ is dispersed along the x axis. ~~Two different wavelength components, 52a and 52b, of the dispersed image 52, which are encoded by modulator 22b are shown by different crosshatching in Fig. 4A.~~ One wavelength ~~Wavelength~~ component [[52a]] is characterized by a center wavelength $(\lambda_2+\lambda_1)/2$ and a bandwidth $(\lambda_2-\lambda_1)$. Similarly, another wavelength component [[52b]] is characterized by a center wavelength $(\lambda_4+\lambda_3)/2$ and a bandwidth $(\lambda_4-\lambda_3)$. ~~For simplicity, only filters 50a and 50b of Fig.2 are shown schematically in Fig. 4A.~~ --

Please amend the paragraph beginning on page 16, line 29 as follows:

-- Fig. 4 ~~Fig. 4B~~ is a graphical illustration of the origin of the gray scales or levels of contrast to illustrate the invention. The curve N1 is the image intensity of 52a along the Y axis and curve N2 is the spatially modulated reflectance of the dispersed radiation filter 50a along the Y axis at an arbitrary rotational angle θ'. The curve N3 is the product of curves N1 and N2 and is

displaced along the vertical axis for clarity. From the figure, it is apparent that the relative reflectance of 50a at θ' is given by the ratio of the area under curve N3 to the area under curve Nl. As modulator 22a is rotated about axis 40 as shown in Figs. 1A and 2, wavelength component 52a is focused onto different portions of dispersed radiation filter 50a. Thus, as the modulator 22a is rotated, wavelength component 52a is encoded by the angle-dependent reflectance of dispersed radiation filter 50a. As shown in <u>Fig. 4</u> ~~Fig. 4B~~, the number of levels of contrast or gray scale are determined by the spatial resolution of the spatially modulated reflectance of filter 50a and the width of the dispersed image 52a along the Y axis. --

Please amend the paragraph beginning on page 25, line 23 as follows:

-- Fig. 9 is a top view of a spatial radiation modulator 22ModDiff to illustrate another aspect of the invention. Modulator 22ModDiff is provided with three dispersed radiation filters, Na, Nb, and Ne, where the modulation function of the three filters are all digitized approximations of the general form $\sin^2(M\theta+p\pi/4)$ described above in reference to modulator 22a of Fig. 2. In modulator 22ModDiff, however, filters Na and Nb are designed to measure the difference in light intensity between a pair of wavelength components of <u>a</u> [[the]] dispersed image ~~52 in Fig. 4A~~. Filters Na and Nb form a pair, Na/Nb, having the same modulation frequency, (e.g., m=3), but are out of phase (i.e. different p values, where the difference between the p values of the two filters is an even integer) such that the signal resulting from the filter pair, Na and Nb, can be nulled by balancing the intensity of the light which is incident on Na and Nb. For instance, the light intensity can be balanced by varying the width of Na with respect to Nb. The resulting signal at the detector 26 is proportional to the difference in light intensity incident on Na and Nb. In this manner, the difference in the light intensity incident on the two filters can

be measured directly, rather than inferring the difference by subtraction, an inefficient approach which wastes dynamic range of the analog to digital converter (ADC). In general terms, the filter pairs can be thought of as being comprised of a signal channel S (e.g. Na) and a reference channel R (e.g. Nb), and the invention measures S-R directly. --